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EXAMINER
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ART UNIT	PAPER NUMBER
1761	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

HG

Office Action Summary	Application No.	Applicant(s)	
	09/720,102	VAN BREMPT ET AL.	
	Examiner	Art Unit	
	C. SAYALA	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *the amendment filed 2/26/03* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"Other" in claim 1 is indefinite. "Other desired and solid raw materials" would be definite in the claims only if applicant has defined what is included by such language, without which it would be unclear what materials applicant "desires". Applicant points to claims 13, 15 and 16 to show "illustrative" materials. In this there is no dispute that the claims show examples or illustrations of what is meant, as diverse as they are. What is unclear is, what else applicant intends as part of his property by such language. Note that claims 15 and 16 are not related to "solid fertilizer raw materials" since claim 15 includes micronutrients and claim 16 is to "fillers".

In claim 1, lines 7-8, applicant claims feeding raw material or a part of it into a melter for melting "desired portion thereof". It is unclear whether this desired portion is the "part thereof" or "the desired portion thereof" is part of the "part thereof". In other words, is applicant further apportioning the "part thereof"? Also, it is unclear how when only a desired portion is melted by placing it in a melter, "a partly molten material" is achieved. Is the heating stopped midway so that only a part of it melts? The specification does not provide information about how raw material supplied to a melter provides a "partly molten material". This newly introduced limitation is critical since applicant argues patentability based on this new limitation, and yet this limitation is confusing and unclear even when read in light of the specification. It is also not clear what amount "partly" represents. Prior art melts the same fertilizer materials and while reciting "partly molten material" to distinguish the instant claims from prior art, applicant has failed to define

what amount this represents so that it can be unequivocally detremined that the amount is not within or near the same amounts.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 74049116.

'116 describes fertilizers consisting of urea, phosphates and potassium salts mixed in a molten salt and granulated and the product is screened and cooled. Applicant's claim 1 recites providing a urea raw fertilizer material, melting only a desired portion or part thereof and keeping this portion in a partly molten state. This mixture of partly molten material, termed "partly molten material" is then subjected to granulation. Granulation temperatures are typically the same as described in the references. It is surmised that even though applicant partly melts his raw material and does not allow all of it to be in the molten state, that is, he probably impedes the complete melting of raw materials in some manner not described in the specification; nonetheless, a complete melt would be achieved during the granulation process, which appears to be conventional, in light of the specification. See page 5, lines 20+. Therefore, little difference is seen between this method and prior art methods because even though a complete molten state is not achieved in the melter, granulation would necessarily achieve the same, because of the temperatures used at this step and such would have been readily obvious to one of ordinary skill in the art at the time the invention was made.

5. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 304824.

'824 teaches molten ammonium phosphate is mixed with a urea melt at 130^0 C. The melt is cooled and granulated. Applicant's claim 1 recites providing a urea raw fertilizer material, melting only a desired portion or part thereof and keeping this portion in a partly molten state, not shown by prior art. This mixture of partly molten material, termed "partly molten material" is then subjected to granulation. Granulation temperatures are typically the same as described in the references. It is surmised that even though applicant partly melts his raw material and does not allow all of it to be in the molten state, that is, he probably impedes the complete melting of raw materials in some manner not described in the specification; nonetheless, a complete melt would be achieved during the granulation process, which appears to be conventional, in light of the specification. See page 5, lines 20+. Therefore, little difference is seen between this method and prior art methods because even though a complete molten state is not achieved in the melter, granulation would necessarily achieve the same, because of the temperatures used at this step.

6. Claims 1, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07157385

'385 teaches mixing molten urea with potassium salts, calcium cyanide and phosphate salts and then granulating the mixture. Temperature used to melt: 100-140^0 C. See page 1 of translation. Applicant's claim 1 recites providing a urea raw fertilizer material, melting only a desired portion or part thereof and keeping this portion in a partly molten state, not shown by prior art. This mixture of partly molten material, termed "partly molten material" is then subjected to granulation. Granulation temperatures are typically the same as described in the references. It is surmised that

even though applicant partly melts his raw material and does not allow all of it to be in the molten state, that is, he probably impedes the complete melting of raw materials in some manner not described in the specification; nonetheless, a complete melt would be achieved during the granulation process, which appears to be conventional, in light of the specification. See page 5, lines 20+. Therefore, little difference is seen between this method and prior art methods because even though a complete molten state is not achieved in the melter, granulation would necessarily achieve the same, because of the temperatures used at this step.

7. Claims 1-3, 7, 13-14, 17-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1462633

'633 teaches a mixture of molten urea at a temperature of 130-137^{0}C and mixing in phosphate or KCl and produced by the process claimed as shown for urea. The molten urea is then cooled, granulated and screened and the oversized granules recycled. See col. 1, page 2, lines 48-50, col. 2, lines 55-100, col. 1, page 2, lines 1-10, 25-45, example 1, claims 9-11. Applicant's claim 1 recites providing a urea raw fertilizer material, melting only a desired portion or part thereof and keeping this portion in a partly molten state, not shown by prior art. This mixture of partly molten material, termed "partly molten material" is then subjected to granulation. Granulation temperatures are typically the same as described in the references. It is surmised that even though applicant partly melts his raw material and does not allow all of it to be in the molten state, that is, he probably impedes the complete melting of raw materials in some manner not described in the specification; nonetheless, a complete melt would be achieved during the granulation process, which appears to be conventional, in light of the specification. See page 5, lines 20+. Therefore, little difference is seen between this method and prior art methods because even though a complete molten state is not achieved in the melter, granulation would necessarily achieve the same, because of the temperatures used at this step.

8. Claims 1-3, 7, 12-13 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Obrestad et al (US Patent 6176892)

See col. 3, lines 1-23, example 1-2. Note the temperatures and water content at col. 2, lines 55-60. Granulation temperatures are given at col. 3. See also claims 1-2 and 7. Applicant's claim 1 recites providing a urea raw fertilizer material, melting only a desired portion or part thereof and keeping this portion in a partly molten state, not shown by prior art. This mixture of partly molten material, termed "partly molten material" is then subjected to granulation. Granulation temperatures are typically the same as described in the references. It is surmised that even though applicant partly melts his raw material and does not allow all of it to be in the molten state, that is, he probably impedes the complete melting of raw materials in some manner not described in the specification; nonetheless, a complete melt would be achieved during the granulation process, which appears to be conventional, in light of the specification. See page 5, lines 20+. Therefore, little difference is seen between this method and prior art methods because even though a complete molten state is not achieved in the melter, granulation would necessarily achieve the same, because of the temperatures used at this step.

9. Claims 4-6 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1462633 and EP 0104705 in view of Elrod et al. (US Patent 5676729), and the specification at page 6, lines 1-7 and further in view of SU 1353765 and EP 0376853.

The GB patent is as described above. EP '705 teaches melting NH_4NO_3 and mixing in solid KCl in a 1:1 ratio. KCl can be preheated and ammonium nitrate heated between 140-180 degrees Celsius. The mix is cooled, granulated, crushed, screened and recycled. See page 3, lines 10+. Part of the KCl can be fed to the granulating zone, as also ammonium phosphate. Claim 2 limitations are inherent because example 1 indicates a continuous process apparatus/system was used, and to control flow rate, heating rates etc are inherent procedures in such a system. Note the exit temperature of the granulation is 90^0C, page 5, line 2, and the moisture content of about 0.6 % by weight. The patents do not teach using hot air to melt the fertilizer or the temperatures of claim 5. However, to use known methods of heating such as hot air, does not lend patentability to the instant claims over the disclosure of the GB and EP patents. To adjust amounts of fertilizers and to use temperatures high enough to melt them, would have been obvious to one of ordinary skill in the art because such conditions would

depend on the particular fertilizer selected and used and its corresponding melting point.

Elrod et al teach that to use fillers with fertilizers like molten urea, is beneficial because it improves anticaking and hardness. See col. 23 and col. 4, lines 1-6. The specification at page 6 discloses that using fillers with fertilizers is conventional. See '765 that teaches that adding boron to ammonium nitrate melt is advantageous. Further, the addition of micronutrients to fertilizers is well known in the art. EP '853 teaches adding micronutrients and ammonium polyphosphate to molten urea. See abstract and page 4, lines 26-32. Therefore, the addition of fillers and micronutrients to the fertilizer melts of the GB patents would have been obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

10. Applicant's arguments filed 2/26/03 have been fully considered but they are not persuasive.

Applicant's arguments directed towards the use of his language "other desired" materials in claim 1 have been carefully considered. Not only is it not clear what "other" materials applicant considers part of his invention, but the term "desired " materials, without clear definition of what he desires as his invention, makes this claim indefinite. As pointed out, his pointing out the claims 13, 15 and 16 does not solve this problem. See the paragraph above at paragraph 2. The materials are varied and diverse, and it is difficult to fathom what else applicant intends as part of his invention. See MPEP 2173.05(b) F. "The aim, the end, the purpose of the claim is to point out particularly and distinctly define the invention to be secured to the individual. The claim is the measure of the patent..." (emphasis in original) In Ex parte Holt, 1884 Dec Comm'r Pat. 43, 62-63 (Comm'r Pat. 1884). The claims herein do not fulfil this purpose See also In re Moore, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971). Moreover, since a patentee has the right to exclude others from making, using and selling the invention covered by the patent (35 USC § 154), a purpose of the second paragraph of 35 USC § 112 is to allow the public

to know what the patent covers, so that those who endeavour, in future enterprise, to approach the area circumscribed by the patent claims are provided with adequate notice demanded by due process of law, so that they more readily and accurately determine boundaries of protection involved and evaluate the possibility of infringement and dominance. In re Hammack, 427 F.2d 1384, 166 USPQ 204 (CCPA 1970).

Applicant's claim 1 recites providing a urea raw fertilizer material, melting only a desired portion or part thereof and keeping this portion in a partly molten state. This mixture of partly molten material, termed "partly molten material" is then subjected to granulation. Granulation temperatures are typically the same as described in the references. It is surmised that even though applicant partly melts his raw material and does not allow all of it to be in the molten state, that is, he probably impedes the complete melting of raw materials in some manner not described in the specification; nonetheless, a complete melt would be achieved during the granulation process, which appears to be conventional, in light of the specification. See page 5, lines 20+. Therefore, little difference is seen between this method and prior art methods because even though a complete molten state is not achieved in the melter, granulation would necessarily achieve the same, because of the temperatures used at this step.

At page 13, applicant lists granule strength, abrasion and dusting being different from commercial granules. Such a comparison and/or statement do not properly distinguish the invention from applied prior art products. Applicant must show that melting the raw material to a state where it is partly molten in the melter instead of completely melting it, does indeed produce a product that is different from prior art products *as applied*, where the materials are completely molten before granulation. Again, it is not clear what "partly molten " is, compared to completely molten. Is the partly molten material within 99.9% of the prior art molten material that is completely molten?

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. SAYALA at Group 1761, telephone number (703) 308-3035.

The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0661.

C. Sayala
Primary Examiner
Group 1761.